

CLAIMS

I claim:

1. A combination wireless and wired secure token access distributed network
5 system comprising:

a) data token means for storing data, including unique customer identifier data;

10 b) one or more data collection and transmission node means that has a data memory for storing the location of said data collection and transmission means, for reading and inputting the data token data and extracting the customer identifier data, including location identifier data where said data token data collection and transmission means is in use, and transmitting said data;

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c) one or more data access point means for receiving said transmitted data from said data collection and transmission means and extracting said unique customer identifier data and data collection and transmission means location identifier data; and

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(d) network system controller means for receiving the data transmitted by said data access point means and informing a user of said network

controller means of the customer identifier data and the data collection and transmission means location identifier data;

whereby when said network system controller is in use, it allows a

5 user to centrally gather customer identifier data simultaneously with the location of the transmitting data collection and transmission node.

2. The combination wireless and wired secure token access distributed

10 network system according to claim 1, wherein said data token means includes a magnetic stripe card.

3. The combination wireless and wired secure token access distributed

15 network system according to claim 1, wherein said data token means includes a chip card.

4. The combination wireless and wired secure token access distributed

20 network system according to claim 2, wherein said data collection and transmission node means includes a magnetic card reader having a wireless communications transmitter.

5. The combination wireless and wired secure token access distributed
network system according to claim 3, wherein said data collection and transmission
5 node means includes a chip card reader having a wireless communications
transmitter.

6. The combination wireless and wired secure token access distributed
10 network system according to claim 1, wherein said one or more data access point
means includes a wireless communications capability whereby all said data
collection and transmission node means within the broadcast radius of said data
access point means is in wireless communications with said data access point
means.

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7. The combination wireless and wired secure token access distributed
network system according to claim 1, wherein said data access point means
includes a hard wired communications capability whereby said network system
controller means communicates with said data access point means.

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8. The combination wireless and wired secure token access distributed
network system according to claim 1, wherein said network system controller

means includes encoding means for encoding customer identifier data onto said data token means.

5 9. The combination wireless and wired secure token access distributed network system according to claim 1, wherein said data access point means stores the data from said data collection and transmission means in a format which is available for TCP/IP access.

10 10. The combination wireless and wired secure token access distributed network system according to claim 1, wherein said data access point means includes overlapping broadcast radiuses to enable multiple data access points to communicate with multiple data collection and transmission nodes and thereby enabling a built-in system redundancy.

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11. The combination wireless and wired secure token access distributed network system according to claim 10, wherein said data access point means including overlapping broadcast radiuses to enable multiple data access points to communicate with multiple data collection and transmission nodes means includes
20 one or more repeater access points in communication with said data access points to enable long range data communication between data collection and transmission nodes within and outside the broadcast radius of said data access points.

12. The combination wireless and wired secure token access distributed network system according to claim 1, wherein said network system controller means includes a central network system controller in wired communication with several peripheral network system controllers for the purpose of centrally gathering data transmissions from multiple data access points in communication with multiple data collection and transmission nodes.

13. An on-premises restaurant communication system for communicating an identifier for a customer's table to a central service counter, said system comprising:

(a) central service counter having a network system controller means for reading a data token that is provided to the customer when the customer places a food order, said token with a customer identifier number;

(b) data input means in a communication device mounted on the customer's table in the form of a data collection and transmission node for inputting the data token and extracting the customer number therefrom;

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(c) data memory in the data collection and transmission node that stores the table identifier;

(d) a communication transmitter in the data collection and transmission

node that transmits a message containing the extracted customer number and the table identifier;

(e) communication receiver means in a data access point device that receives the message and extracts the customer number and the table identifier therefrom; and

(f) a user interface in the network system controller that receives the extracted customer number and table identifier from the data access point and informs a food server of the table identifier for the customer's table.

14. The restaurant communication device according to claim 13
further comprising means within the network system controller for encoding a customer
15 number on the data token.

15. The restaurant communication device according to claim 13 further comprising a communication transmitter in the data collection and transmission node that transmits a message containing the extracted customer number and the table identifier in short bursts in the 433MHz radio frequency band to meet FFC transmission requirements at random intervals to avoid multiple collisions.

16. The restaurant communication device according to claim 13 further comprising a magnetic stripe reader for reading magnetic stripe data token in the

data collection and transmission node.

17. The restaurant communication device according to claim 13
further comprising a chip card reader for reading chip card data token in the data
5 collection and transmission node.

18. The restaurant communication device according to claim 13
further comprising:

10 (a) a communication transmitter and receiver in the communication
device and data collection and transmission node that transmits a message containing
the extracted customer number and the table identifier;

15 (b) said communication transmitter and receiver receives transmitted data
integrity confirmation from the data access point; and

(c) a communication transmitter and receiver in said data access point that
receives the message and extracts the customer number and the table identifier;

20 whereby said communication transmitter and receiver in said data access
point transmits an acknowledgment back to the data collection and transmission
node.

19. The restaurant communication device according to claim 18 further comprising a customer identification token reader data collection and transmission node with the capability to order menu items from the table and a payment token reader to accept payment for menu items ordered.

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20. The restaurant communication device according to claim 19 further comprising:

(a) a customer identification token reader in the data collection and

10 transmission node;

(b) a credit card magnetic stripe reader in the data collection and

transmission node;

15 (c) an encryption engine to secure all sensitive payment token data prior

to being transmitted by the data collection and transmission node;

(d) a data access point device capable of accepting the encrypted message

from the data collection and transmission node; and

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(e) accessing a payment gateway to process the payment transaction.

21. The restaurant communication device according to claim 13 further comprising a network system controller software application with a graphical interface to display table and data token status from the data access point including current table status such as length of time the customer has waited since ordering.

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22. The restaurant communication device according to claim 13 further comprising multiple data access points each covering overlapping areas of the restaurant and said multiple data access point's each having wireless or wired connectivity to one or more network system controllers.

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23. The restaurant communication device according to claim 13 further comprising portable computing devices which communicate with the data collection and transmission nodes and the data access points allowing servers to enter transactions for customer orders and payment processing.

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24. The restaurant communication device according to claim 13 further comprising one or more data access points connecting to a network system controller through intranet and/or internet networks.

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25. A wireless casino gaming controller and communication system for communicating game status and statistics, said system comprising:

- (a) multiple data collection and transmission nodes which monitor and

track the various game statistics;

(b) one or more network data access points and communications means

for the game status to be transmitted to said network access points at regular time

5 intervals;

(c) data collection and transmission node and communications means for
said network access points to collect data from multiple data collection and transmission
nodes and forward the collected information to a network system controller; and

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(d) a software application in the network system controller to display the
statistics of multiple games.

26. A wireless casino gaming controller and communication system

15 according to claim 25 further comprising multiple network data access points each
covering overlapping areas of the casino, and each of said multiple network data access
points having wireless or wired connectivity to one or more network system controllers.

27. A wireless casino gaming controller and communication system

20 according to claim 25 further comprising one or more network data access points which
connect to a network system controller through intranet and/or internet networks.

28. A wireless casino gaming controller and communication system according to claim 25 further comprising a software application in the network system controller which directs a graphical user interface to display status and statistical data from all of the games being monitored at a remote location.

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29. A wireless casino gaming controller and communication system according to claim 27 further comprising multiple data collection and transmission nodes that accept a data token containing player identification data for the purpose of player activity tracking, and a software application in the network system controller which monitors player tracking data and notifies management when defined criteria is met for player warnings and/or rewards.

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30. A wireless casino gaming controller and communication system according to claim 27 comprising multiple data collection and transmission nodes which accept a secure token for player tracking and payment acceptance, and a software application within the network system controller through which monitors and records the secure token monetary value and validates the secure token for validity, and notifies the network system controller operator if a secure token has been compromised.

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31. A wireless casino gaming controller and communication system according to claim 27 comprising portable computing devices which communicate with the data collection and transmission nodes and the network data access points allowing servers and game administrators to monitor game status and enter transactions for

customer orders and payment processing.

32. A wireless casino gaming controller and communication system according to claim 27 further comprising multiple data collection and transmission nodes and network data access points where each network data access point gathers information from a group of data collection and transmission nodes called a micro-net, and further where:

- (a) each micro-net operates on a different subset of the available RF frequencies to avoid data collisions;
- (b) each network data access point scans its assigned set of frequencies for active data collection and transmission nodes and forwards the data to the network system controllers; and
- (c) each data collection and transmission node selects the network data access point with the best signal integrity from a list of available micro-nets, whereby the list of micro-nets is supplied by the network system controller.

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33. A wireless casino gaming controller and communication system according to claim 27 further comprising multiple network data access points in communication with multiple repeater access points where selected network data access points can forward information through said repeater access points to the network system controller.

34. A wireless casino gaming controller and communication system according to claim 33 further comprising multiple network data access points in
5 communication with multiple repeater access points where selected network data access points can forward information though said repeater access points to the network system controller, said repeater access point are in wireless communication with each other as well as said network access points.

10 35. An entry access system communicating an identifier for an employee's identification and location to a network system controller and responding to the selected locations door activation with a access request, said system comprising:

15 (a) a data token and a data token input means in a communication device mounted on the access door in the form of a data collection and transmission node for the purpose of inputting the data token stored data and extracting the employee's identification therefrom;

20 (b) a data collection and transmission node and a communication transmitter in the data collection and transmission node that transmits a message containing the extracted employee identification number and the door identifier data;

(c) a data memory in the data collection and transmission node that stores the access door identifier data;

(d) a data access point and a communication receiver in said data access point that receives the message and extracts the employee id number and the door identifier therefrom; and

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(e) a network system controller and a user interface in said network system controller that receives the extracted employee identification number and door identifier data from said data access point and validates the employee's entry authority, and sends a command to the door lock to enable entry.

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36. The entry access system according to claim 35 further comprising means within the network system controller for encoding an employee identification number on the data token.

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37. The entry access system according to claim 35 further comprising a communication transmitter in the data collection and transmission node that transmits a message containing the employee identification number and the door identifier data in short bursts, in the 433MHz radio frequency band to meet FFC transmission requirements, at random intervals to avoid multiple collisions.

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38. The entry access system according to claim 35 further comprising a magnetic stripe data token and a magnetic stripe reader for reading said magnetic stripe data token in the data collection and transmission node.

39. The entry access system according to claim 35 further comprising
a chip card data token and a chip card reader for reading said chip card data token in
the data collection and transmission node.

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40. The entry access system according to claim 35 further comprising
a communication transmitter and receiver in said data collection and transmission node
that transmits a message containing the employee identification number and the door
10 identifier data, and receives the transmitted data integrity confirmation from the data
access point; and a communication transmitter and receiver in the data access point that
receives the message and extracts the employee id number and the door identifier and
transmits an acknowledgment back to the data collection and transmission node.

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41. The entry access system according to claim 35 further comprising
a network system controller having a software application with a graphical interface to
display all access points status from the data access point including current door status.

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42. The entry access system according to claim 35 further comprising multiple data access points each covering overlapping areas of an organization, and each with wireless or wired connectivity to one or more network system controllers.

5 43. The entry access system according to claim 35 further comprising portable computing devices which communicate with the data collection and transmission nodes and the data access points, allowing emergency and security personnel to enter any door quickly at any time.

10 44. The entry access system according to claim 35 further comprising one or more data access points connecting to a network system controller through intranet and/or internet networks.

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